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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,800	12/09/2003	Debjit Das Sarma	5500-97400	2698

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MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL (AMD)
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EXAMINER

NGO, CHUONG D

ART UNIT	PAPER NUMBER
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2193

MAIL DATE	DELIVERY MODE
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08/24/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

80

Office Action Summary**Application No.**

10/730,800

Applicant(s)

SARMA, DEBJIT DAS

Examiner

Chuong D. Ngo

Art Unit

2193

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/18/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 1-22 are directed under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1-22 are directed to apparatus and method for merely performing manipulations and calculations of data values. In order for a such a claimed invention that merely involves manipulation and calculation of data values to be statutory, the claimed invention must accomplish a practical application. That is the claimed invention must transform an article or physical object to a different state or thing, or produce a useful, concrete and tangible result. State Street, 149 F.3d at 1373-74, 47 USPQ2d at 1601-02. Also see "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility", OG Notices: 22 November 2005. It is clear from claims 1-22 that the claims merely involve calculations and manipulations of data. The claimed invention does not transform an article or physical object to a different state or thing. The inputs are numerical values and the output is also a numerical value. The result produced by the inventions do not have a real world value but merely numerical values without a practical application recited in the claims to make the result useful, concrete and tangible. Therefore, claims 1-22 are directed to non-statutory subject matter as the claimed invention fails to accomplish a practical application. Further, since the claims appear to cover every substantial practical application, they are also directed to a preemption of the

claimed manipulation and calculation of data.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Song et al. (6,144,975).

Song et al. discloses in figure 1 a multiplication substantially as claimed, including a partial product generation logic (100), a plurality of carry save adders (101,102,103), and a first carry propagate adder (18,23). The difference is that the partial product generation logic and the plurality of carry save adders process the lower significant portion in the first phase and the higher significant portion in the second phase. Therefore, the first carry propagate adder phase begins after the first rather than the second carry save adder execution phase completes as claimed. However, to a person of ordinary skill in the art, it would have been an obvious modification to Song et al to have the partial product generation logic and the plurality of carry save adders process the significant portions in the reversed order, and the first carry propagate adder phase thus begin after the second carry save adder execution phase completes, and an arithmetic left shift would be required to properly align the redundant product of the higher significant portions with the partial products of the lower significant portion for accumulation in

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the second phase as claimed. This is because the modification is well within the level of ordinary skill in the art and does not result in any unexpected result.

5. Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al. (5,220,525).

Anderson et al. discloses in figure 2 a multiplication substantially as claimed, including a partial product generation logic (24,26,28,30), a plurality of carry save adders (40,42), and a first carry propagate adder (46). The difference is that the partial product generation logic and the plurality of carry save adders process the lower significant portion in the first phase and the higher significant portion in the second phase. Therefore, the first carry propagate adder phase begins after the first rather than the second carry save adder execution phase completes as claimed. However, to a person of ordinary skill in the art, it would have been an obvious modification to Anderson et al to have the partial product generation logic and the plurality of carry save adders process the significant portions in the reversed order, and the first carry propagate adder phase thus begin after the second carry save adder execution phase completes as claimed, and an arithmetic left shift would be required to properly align the redundant product of the higher significant portions with the partial products of the lower significant portion for accumulation in the second phase as claimed. This is because the modification is well within the level of ordinary skill in the art and does not result in any unexpected result.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuong D. Ngo whose telephone number is (571) 272-3731. The examiner can normally be reached on Tuesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Chuong D Ngo/
Primary Examiner, Art Unit 2193

08/14/2007